

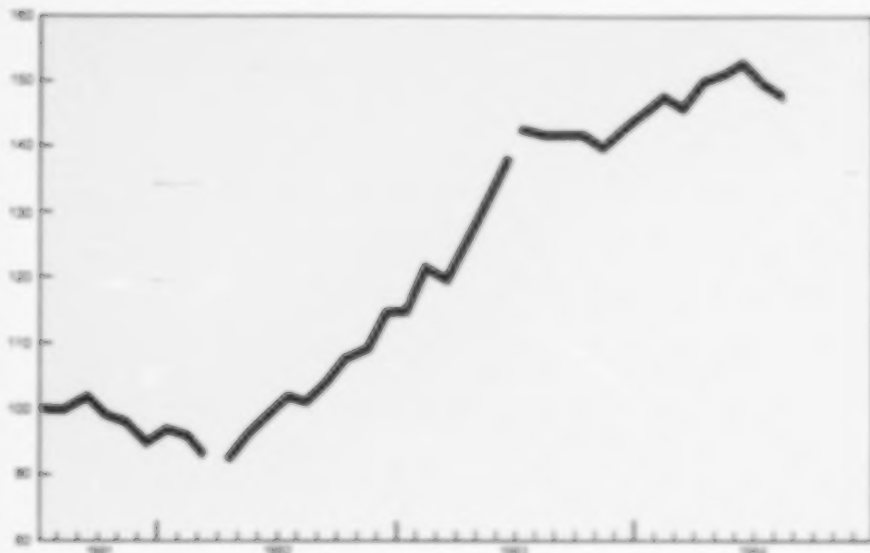
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1985 Dodge/Sweet's Construction OUTLOOK

The Building Cycle
Faces Middle Crisis



The Dodge Index
of Total Construction Contract Value
Smoothed by 3-month moving average
1977 = 100



The Building Cycle Faces Midlife Crisis

It is now two and a half years since the current building cycle got its start. Considering that the typical cycle lasts between five and six years from beginning to end, this one has recently achieved the dubious status known as middle age.

A glance at the Dodge Index is all that's required to see that the symptoms of midlife crisis are already evident. The building market, although still expanding, has lost much of its earlier drive. And during 1984, its primary source of support shifted from housing to nonresidential building—more evidence of cyclical maturity. These and other signs of "reaching the peak" are cause for mixed emotions.

There's much for building product manufacturers, contractors, and suppliers to celebrate as 1984 draws to a close. Over the past two years, the value of construction contracting has increased by more than 50 percent. The record total of new construction started in 1984 implies a very busy 1985, as the work contracted this year is brought to completion.

But as the good times continue to roll, it's hard to ignore the prospect that for a while, at least, things won't be getting any better. Even more threatening is the realization that stability is not a natural condition for the volatile construction market. Once a cycle loses its momentum, it customarily enters a period of decline. It doesn't have to happen that way every time, however, and this could be one of the exceptions. There's a good chance that, after a temporary setback, this aging building cycle will show that it isn't ready to call it quits yet.

Even more than most building cycles, this one has been—and continues to be—dominated by credit conditions. It got its start two and a half years ago when the Federal Reserve backed away from the extreme monetary restraint that it considered necessary to bring inflation out of the economy in the early 1980s. As interest rates fell, housing responded almost instantly and was followed not long after by a recovery of nonresidential building. But expansion lost its momentum early in 1984 soon after the Fed began to tighten credit again.

Although it sometimes seems that way, interest rates aren't the only influence on the building cycle. The surprising strength of the economy's recovery from its deep recession is still supporting vigorous expansion of commercial and indus-

trial construction. The much-improved budgetary position of state and municipal governments is speeding the transition of public works programs from federal to local determination. Demographic change at the upper and lower ends of the age spectrum is the forerunner of increased demand for educational and healthcare facilities. But the potential of these positive developments for construction markets won't be fully realized unless the monetary environment becomes more supportive. Therefore, the 1985 Outlook begins by considering how Federal Reserve policy will affect the credit-sensitive construction sector during the next several quarters.

The Case For Monetary Relaxation

September brought encouragement to the building industry in the form of a one-quarter point decline of the prime lending rate and a barely perceptible lowering of the average rate for fixed mortgages. These welcome reversals were signals that the year-long rise of interest rates is at or near its peak. Whether the credit market is leading or following the Fed in a turnaround remains to be seen, but it is becoming clear that the Fed now has more and

better reasons to let rates come down than to push them higher. The best reason: The latest round of monetary restraint has done its job.

The justification for another dose of monetary restraint in 1984 had little, if anything, to do with inflation, which is temporarily dormant. In place of its earlier goal of purging the economy of double-digit inflation, the Fed is now concerned with a variety of more current problems: economic growth, the deficit, and a potential international financial crisis.

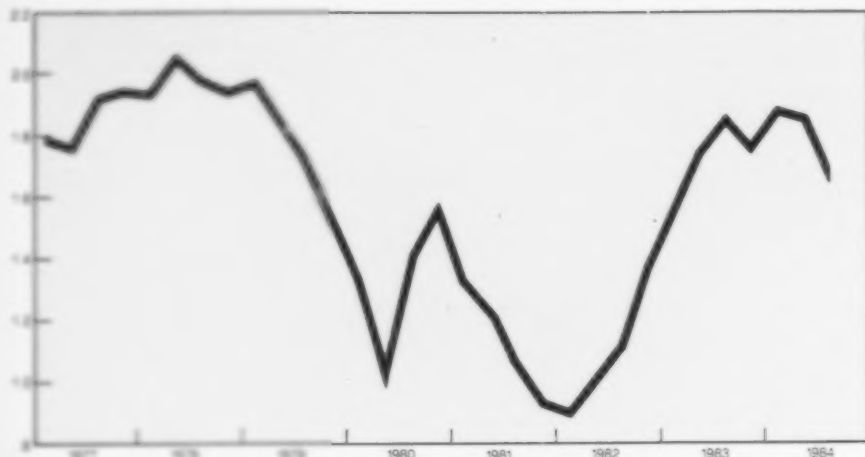
Early in 1984, when the economy was boiling ahead at a 10 percent real GNP clip, the need to "lean against" the massive fiscal thrust of the federal deficit was uppermost among the Fed's priorities. But now, at the other end of 1984, there is an accumulation of evidence showing that the Fed has leaned hard enough—for the time being, at least. The quarter-by-quarter downward progression of GNP growth (10 percent, 7 percent, 4 percent) is a measure of success. Other signs are more ominous: Unemployment has stabilized above 7 percent; housing starts are declining; the composite index of leading indicators recently turned negative. These are indications of excess.

Now that the economy has settled back to a more desirable growth rate, monetary policy must be modified in order to keep it there as long as possible. Sustaining a 4 percent rate of GNP growth requires relaxation of 1984's tightening, and that adjustment appears to be in the making.

The continuing presence of the deficit adds another dimension to monetary policy in the mid-1980s. The threat of a string of huge deficits stretching from here to 1990 means, simply, that the economy is locked into its present "loose fiscal/tight monetary" environment until there is a major improvement in fiscal operations. This prospect greatly limits the freedom of the Federal Reserve, whose choice is not between monetary ease and monetary restraint, but merely between more or less restraint. The risk of too much restraint is "growth recession" or a close encounter with stagnation by mid-1985—an outcome that is clearly inconsistent with the Fed's current goal of sustaining the economy's growth. In the game of monetary brinkmanship, the only appropriate strategy for 1985 is to err on the side of too little restraint rather than too much.

Residential Building

Residential Building
Billions of Dollars 1980
Residential Building Starts 1980



Housing: Getting Turned Around Again

Mortgage Rates in 1985: If this interpretation of monetary events is mostly on target, it carries a very important message for the construction and building-materials industries. It is this: The two-and-a-half-year-old building cycle may be experiencing a temporary interruption in 1984, but the market isn't necessarily in the grip of one of its typical cumulative downward spirals. The housing recovery of 1982-83 failed to develop fully in 1984 due to a calculated move to monetary restraint, but if the Federal Reserve behaves through 1985 in a manner consistent with what it has been doing in 1984, the time is ripe for a switch to supportive monetary policy.

A tentative relaxation of monetary restraint in 1985 does not, unfortunately, translate into an avalanche of falling interest rates. The demands for long-term credit will remain strong in 1985's first half despite the economy's slowdown. The Treasury will continue to dominate the money market as its deficit persists. Meanwhile, the business sector's requirements for funds to finance ambitious capital spending plans will be increasing. While these primary demands are not likely to negate the effects of credit relaxation altogether, they will severely limit the extent to which rates can fall.

As the current change in monetary conditions works its way backwards to the mortgage market, where the response is often delayed and diffused, the sequence is likely to be one of gradual and limited improvement. Mortgage rates (in this case a weighted average of both fixed and adjustable mortgages, currently quoted at 14.1 percent) will probably remain steady through 1984's fourth quarter and then ease to just under 14.0 percent in the opening quarter of 1985. Continued

decline through all of next year could bring the final quarter's rate to about 13.5 percent, leaving next year's annual average rate unchanged from the 1984 average rate except for one all-important difference: direction. Further decline to 13.25 percent or lower by the final quarter of 1986 is tentatively assumed.

Although the prospect of a retreat of mortgage rates during 1985 clears the way for a revival of homebuilding next year, 1984's rate increase is still pulling the market down. The decline of housing starts, which accelerated in the second half of 1984, is not likely to be reversed before spring. By then, starts will have slipped from their 1.9-million-unit peak (84:1) to 1.5 million before beginning the next upward climb. However, the likelihood that the current decline will end somewhere around 1.5 million units, and not extend all the way to 1.0 million as in the last two rounds of credit tightening (1980 and 1982), is the 1985 outlook's most encouraging feature. It makes the difference of at least 300,000 housing starts in 1985 alone.

Outlook

Since one-family and multi-family building react somewhat differently with respect to mortgage rates, it is better to consider them separately.

One-Family Homes: The accompanying chart shows just how closely single-family homebuilding has been linked to mortgage rates since 1980—much more so than in the preceding "cheap money" era.

After reaching a peak of 1.1 million units in February 1984, one-family housing starts held up reasonably well through spring as mortgage rates advanced a full percentage point in

less than six months. In July, however, building fell below the 1.0-million-unit threshold as fixed mortgage rates reached 15 percent. Had it not been for the widespread acceptance of Adjustable Rate Mortgages (ARMs), which reduced the effective commitment rate to something more like 13 percent, the 1984 decline of homebuilding would undoubtedly have been much sharper.

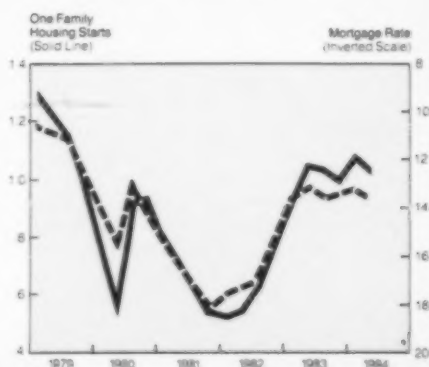
Although no further rise is anticipated for mortgage rates, the housing market had not fully adjusted to 1984's full-point increase by the third quarter, when starts were still averaging 975,000 units. Further decline to a rate of about 925,000 units in 1985's first quarter is expected before the next upturn begins. By the final quarter of next year, easing mortgage rates will bring one-family housing starts back to 975,000 units.

Owing to a delayed response of building activity to changes in credit markets, 1985 one-family building, at an estimated 950,000 units, will not match this year's 1.1 million. Continued recovery to 1.05 million (or a bit higher) is in prospect for 1986, however.

Multi-Family Units: A comparison of the current mix of single- and multi-family units with that of the previous cyclical peak (1977/78) demonstrates the dramatic shift toward multi-family building that has taken place in only half a dozen years—from 30 percent of total housing starts to 43 percent.

The affordability issue—played out in the substitution of condos for prohibitively priced one-family homes—explains a large part of the currently high proportion of multi-family building, but that doesn't tell it all. The rental side of the multi-family market has something special going for it, too. Since 1982, the Economic Recovery Tax Act (ERTA) has been responsible for channeling additional capital into the construction of apartments. This is only one of several types of building to enjoy the advantage of tax-sheltered investment by means of ERTA's liberalized depreciation allowance.

The outlook for multi-family building must distinguish between what is real and what is artificial in this market. Demographics, interest rates, and



1985 National Estimates Dodge Construction Potentials

Nonresidential Buildings	1984 Preliminary	1985 Forecast	Percent Change 1985/84
Floor Area (millions of square feet)			
Office Buildings	300	250	-17
Stores & Other Commercial	477	476	—
Manufacturing Buildings	155	180	+16
Total Commercial & Mfg.	932	906	-3
Educational	86	88	+2
Hospital & Health	75	74	-1
Other Nonresidential Buildings	117	127	+9
Total Institutional & Other	278	289	+4
Total Nonresidential Buildings	1,210	1,195	-1
Contract Value (millions of \$)			
Office Buildings	\$21,850	\$19,100	-13
Stores & Other Commercial	18,275	18,775	+3
Manufacturing Buildings	7,425	9,050	+22
Total Commercial & Mfg.	\$47,550	\$46,925	-1
Educational	\$ 7,475	\$ 7,975	+7
Hospital & Health	7,750	8,025	+4
Other Nonresidential Buildings	9,450	10,375	+10
Total Institutional & Other	\$24,675	\$26,375	+7
Total Nonresidential Buildings	\$72,225	\$73,300	+1

Residential Buildings	1984 Preliminary	1985 Forecast	Percent Change 1985/84
Dwelling Units (thousands of units*)			
One-Family Houses	1,010	950	-6
Multifamily Housing	760	650	-14
(*FW Dodge basis)			
Total Housekeeping Residential	1,770	1,600	-10
Floor Area (millions of square feet)			
One-Family Houses	1,595	1,490	-7
Multifamily Housing	730	635	-13
Nonhousekeeping Residential	100	90	-10
Total Residential Buildings	2,425	2,215	-9
Contract Value (millions of \$)			
One-Family Houses	\$66,750	\$65,925	-1
Multifamily Housing	28,250	25,325	-9
Nonhousekeeping Residential	7,150	6,750	-6
Total Residential Buildings	\$102,150	\$98,500	-4
Nonbuilding Construction			
Contract Value (millions of \$)			
Highways & Bridges	\$17,300	\$18,500	+7
Sewer & Water	7,800	8,500	+9
Other Public Works	8,175	8,175	—
Total Public Works	\$33,275	\$35,175	+6
Utilities	\$ 3,500	\$ 4,000	+14
Total Nonbuilding Construction	\$36,775	\$39,175	+7
All Construction			
Contract Value (millions of \$)			
Total Construction	\$211,150	\$210,975	—
Dodge Index (1977 = 100)	150	150	

building costs are real; accelerated depreciation is not real. The effects of the real demand forces in the marketplace—already evident before ERTA—will continue to support a high volume of condominium construction all through the 1980s. Tax-sheltered real-estate development, on the other hand, continues to exist only at the pleasure of Congress and the IRS.

For the near term, multi-family building is being subjected to opposing forces. Because the 1984 deficit-reduction bill brought only cosmetic changes in real-estate tax shelters, accelerated depreciation will continue to subsidize apartment construction for a while longer. But 1984's interest rate rise will be curbing the expansion of condos through early 1985, just as these rates are inhibiting one-family building. Consequently, total multi-family contracting is forecast to recede in 1985 from this year's extraordinary 760,000-unit volume to 650,000 units. In 1986, a modest

gain in condominium building would be consistent with lower mortgage rates, but by then, real-estate tax shelters may be losing some of their current appeal.

Total Housing Starts: With mortgage rates leveling off late in 1984, housing starts will continue to decline into early 1985, but should be back on the path to recovery before the middle of next year. An upturn could begin even earlier than that, but hardly soon enough to head off a 10 percent decline in total housing starts for 1985 as a whole.

A quarterly pattern of 1.585—1.565—1.600—1.650 million units (annual rate) through 1985 would bring next year's housing start total to 1.600 million units, going into 1986 on a rising trend. The 1985 "mix," consisting of an estimated 950,000 one-family homes and 650,000 multi-family units, would bring the proportions a step in the direction of 60:40,

which is expected to be the prevailing ratio for the next several years.

Residential Building Contract Value

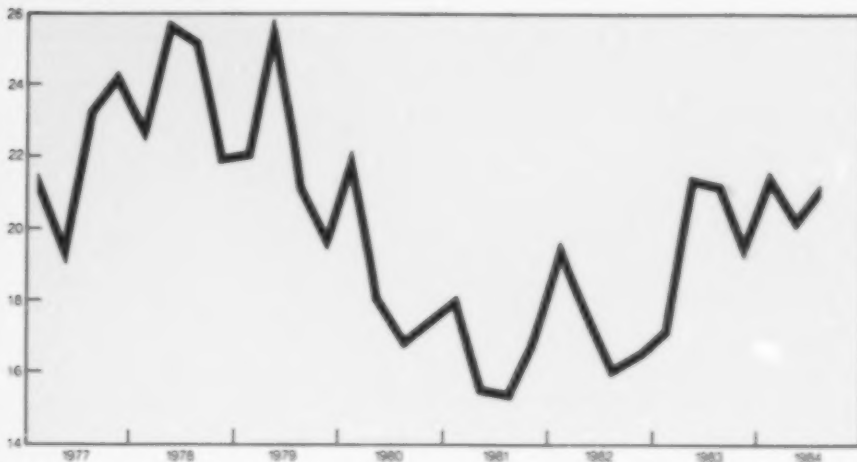
Seasonally adjusted annual rates, in billions of dollars

Year/Quarter	Total	One Family	Multi-Family*
1984			
I	\$105.0	\$70.4	\$34.6
II	105.8	68.3	37.5
III	99.8	64.8	35.0
IV	98.0	63.5	34.5
1985			
I	\$95.1	\$62.6	\$32.5
II	95.8	64.4	31.4
III	99.6	67.2	32.4
IV	103.5	69.5	34.0
1984	\$102.2	\$66.8	\$35.4
1985	\$ 98.5	\$65.9	\$32.6
% Change	- 4	- 1	- 8

*Includes Nonhousekeeping Residential Buildings

Nonbuilding Construction

Public Works Construction
Contract Value in Billions of Constant (1977) Dollars
Seasonally adjusted annual rates



Public Works: Adapting To The New Federalism

By long tradition, most public works construction has been *financed* by the federal government, but *administered* at the local level through grants-in-aid to state and municipal governments. In the 1980s, however, that process is being reshaped to conform to the Reagan Administration's "New Federalism" policy, which aims to make local governments responsible for a greater share of the financing. The transition has not been a smooth one, but after an initial setback, public works construction is now advancing again.

At first it was easier for the federal government to restrain its spending than it was for local governments to expand theirs in proportion. Beseated by shrinking revenue due to the long and deep recession of the early 1980s, and further inhibited by soaring bond rates, municipal governments were forced to retrench while they sought new sources of revenue. Along with most other local government services, contracting for public works construction was reduced in the early 1980s—from a peak of \$29.2 billion in 1979 to \$24.7 billion in 1981, a decline of 15 percent (25 percent in constant dollars).

By 1983, the public works construction market was finding new sources of support. Once the economy broke out of recession into its strong recovery, the red ink of municipal finance turned black. As the substantial state and local tax increases levied during the early 1980s suddenly began to pay off, postponed public works projects could be reconsidered. It was also at this time that the federal government launched its massive \$20-billion-plus/four-year highway/bridge/mass-transit construction program, the Surface Transporta-

tion Assistance Act (STAA). Seemingly a contradiction to the New Federalism's philosophy of local determination, STAA fits into the broader scheme of public works financing because it is a self-supporting program funded by its own user taxes.

Due principally to a 25 percent jump in highway/bridge construction, contracting for total public works projects surged to \$29.8 billion in 1983—slightly surpassing the former 1979 peak. In 1984, continued expansion that was still mostly highway-related brought total contract value another 12 percent higher to \$33.3 billion. It is worth noting, however, that even with the new-found support of the STAA program, 1984's constant dollar total of public works construction still remains below the peak volume reached in the closing years of the 1970s.

Outlook

Since early 1983, highway/bridge construction has been the dynamic element of the otherwise sluggish public works sector. But it is now a year and a half since STAA began, and highway/bridge contracting, which surged from \$12.3 billion in 1982 to its current \$17.3 billion, has experienced most of the escalation it will be getting from this special user tax program. For the balance of STAA's limited life (four years altogether, unless extended), highway/bridge contracting will grow only as fast as the base of fuel consumption to which its financing is linked. This means that, for the near future, continued expansion of total public works construction will depend mainly on (1) other federal programs, and (2) increased initiative on the part of local

governments. With a few exceptions, neither source holds a great deal of potential for growth in 1985.

Highways and Bridges: Along with its escalation to a rate of \$17 billion in 1983, contracting for highway construction has become uncharacteristically volatile. Because of political controversy related to the normally routine process of reviewing the Interstate Cost Estimate (ICE), Congress adjourned last November without approving the disbursement of a substantial block of DOT grants. Contracting declined sharply in the early months of 1984, then rebounded once the frozen funds were released.

The 1983 change in the legislative process which led to last winter's interruption of disbursements could result in a different and less stable pattern of highway/bridge construction in the future. For 1985 as a whole, limitations on the growth of federal and local sources of funding will hold next year's contracting gain to a nominal 7 percent. This contrasts with the extraordinary 20 percent annual increases of the past two years.

Frozen Assets

ICE is the acronym for Interstate Cost Estimates—the process through which Congress has been monitoring the cost of completing the interstate highway network on a state-by-state basis since the 1950s. Congressional approval of ICE is necessary prior to the periodic distribution by DOT of federal highway construction grants to the individual states.

Until recently, ICE was a routine matter requiring no more than a simple resolution approving the states' allocations according to a set formula. But in 1983, a Supreme Court decision on the "Congressional veto" requires that ICE must be passed as a law. And as a law, ICE becomes the bearer of amendments which might not survive on their own merits.

Controversial amendments (e.g., a "Buy America" provision, several demonstration projects, etc.), and not ICE itself, have led to extensive debate and unnecessary delay of the allocations.

Because Congress again adjourned without approving the Interstate Cost Estimates (for 1985), there's reason to expect another interruption of highway contracting soon after 1984's funds run out.

Water Resources (Dams and Reservoirs, River and Harbor Development): The combination of federal and local government spending, plus a small amount of private investment, has been sustaining a fairly steady \$3 billion annual total of contracting for water resource development since that level was first reached in 1978.

Budget projections covering the next several years for the federal agencies responsible for water resource development (Corps of Engineers, Bureau of Reclamation) indicate a steady flow of funding in the range of \$1.1 to \$1.2 billion—slightly below their outlays during 1980-1983. However, increasing responsibility of state and municipal governments, and their much-improved tax base to support the trend toward local self-determination, implies a gradually rising level of local support from the current \$1.6 billion level. To complete the picture, the small but cyclically expanding private source of funding for water resource construction will help raise 1985's total contract value 3 percent to just under \$3.2 billion.

Water Supply Systems: Treatment facilities and transmission lines are the link between water resources and ultimate users. These linkages are provided more or less as their need arises, responding to the cyclical swings of building, in contrast to water resources themselves, which are developed through long-term, ongoing programs.

In the current building cycle, contracting for water supply systems has lagged general building, as it often does, but should soon be accelerating. A strong 15 percent advance in 1985 to \$3.1 billion is indicated to catch up to the large volume of building initiated during the past two years.

Sewer and Waste Disposal: Stimulated by the considerable federal support available since 1972 through the Environmental Protection Agency (EPA), construction of waste-water treatment facilities accelerated sharply during the 1970s, reaching an annual peak of \$6 billion late in that decade. Since then, however, federal budgetary restraint has led to a downgrading of EPA's water-purity standards and a sharp cutback in the Agency's grants for sewage-treatment construction projects. By 1982, construction contracting had fallen more than 25 percent to its recent low of \$4.4 billion. As federal grants stabilized and local funding increased, construction partially recovered to \$5.1 billion by 1984.

Recently proposed amendments to the Clean Water Act would significantly boost EPA's construction grant program for treatment plants. However, because the 98th Congress adjourned without acting upon these proposals, federal

funding in 1985 will remain approximately the same as the amount that was available in 1984. Owing mainly to the improved capability of state and municipal governments to supplement these basic federal grants for the construction of waste-water treatment facilities, 1985 is likely to show another modest improvement of 5 percent, or a little better, to an estimated \$5.4 billion of newly started projects.

Other Nonbuilding Construction: The Surface Transportation Assistance Act provides for mass-transit construction as well as highways and was instrumental in funding two sizeable rail projects in 1984. As a consequence, "Other" nonbuilding construction—which is where mass-transit projects are included, along with petroleum pipelines, domestic military construction, and a variety of other hard-to-classify work—spurred 20 percent beyond its 1982/83 level to a record of \$5.1 billion.

As contracting eases back toward its longer-term trend in 1985, a total of \$5.0 billion of "Other" nonbuilding work is anticipated.

Total Public Works: The Surface Transportation Assistance Act—the biggest public works program to come along in many years—was largely responsible for turning the heavy construction sector around in 1983. But as the highway and mass-transit markets adjust to this multi-billion-dollar annual supplement, public works contracting is settling into an all-too-familiar pattern at a level roughly \$5 billion higher than pre-STAA values.

Until the next major development (which might be the expiration of STAA,

or the introduction of some new program), the increased dependence of the public works market on state and local sources of financing implies little more than nominal growth (i.e., slightly better than the going rate of inflation) from the current rate of contracting. For 1985 this means an increase of 6 percent to \$35.2 billion.

The next big event coming up in the public works arena is the National Infrastructure Act—a proposed 10-year, \$30 billion federal credit program with enough leverage to generate as much as \$100 billion of infrastructure improvements. This plan to offer interest-free federal loans of \$3 billion per year to the states could sustain the current strong level of public works construction well beyond STAA's scheduled expiration at the end of 1986.

Nonbuilding Construction Contract Value

Seasonally adjusted annual rates, in billions of dollars

Year/Quarter	Total	Public Works	Utilities
1984 I	\$36.1	\$33.1	\$3.0
II	34.5	31.5	3.0
III	37.8	34.8	3.0
IV	38.7	33.7	5.0
1985 I	\$38.0	\$34.4	\$3.6
II	38.7	34.8	3.9
III	39.5	35.4	4.1
IV	40.5	36.1	4.4
1984	\$36.8	\$33.3	\$3.5
1985	\$39.2	\$35.2	\$4.0
% Change	+ 7	+ 6	+ 14

Nonresidential Building

Nonresidential Building: Bridging The Gap

Until interest rates recede enough to enable a broadly based revival of building activity, the market will depend heavily on commercial and industrial building to sustain the current level of contracting. Two features of nonresidential building will be supportive during this critical period. It is less sensitive (than housing) to interest rates, and it thrives in an environment of general business expansion. But there are also some handicaps, and they will make getting through 1985 more difficult than it should be: Retail building (stores and warehouses) is primarily a response to consumer relocation and therefore tracks homebuilding

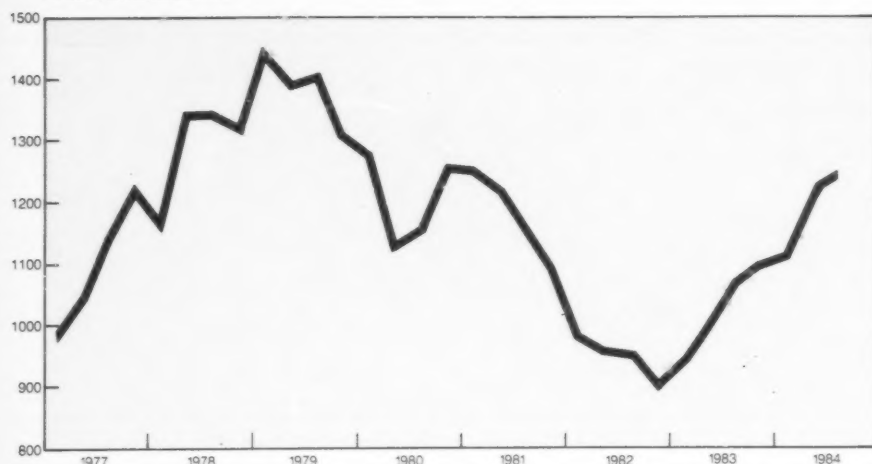
closely—down as well as up. The office building market is widely considered to be overbuilt and is vulnerable to decline. As these strengths and weaknesses interact during the quarters ahead, they are more apt to lead to trade-offs than to give the nonresidential building sector a clear direction.

Outlook

Retail Building: With allowance for a brief lag, 1984's total of 1.77 million housing starts can be expected to create a demand for approximately 425 million square feet of stores and warehouses. In view of the fact that the rate of contract-

Nonresidential Building

Millions of square feet
Seasonally adjusted annual rates



ing for retail building crossed the 400-million-foot threshold in 1984's second quarter and advanced to 420 million in the third (by which time homebuilding was in decline), there is obviously little room left for the expansion of retail building until the housing market revives.

Store and warehouse construction will be reaching its peak during 1984:IV and 1985:I as the rate of contracting tops out at 425 million square feet before reacting to 1984's second-half housing decline. By the final quarter of 1985, contracting for retail building will be back in the current 400- to 410-million-square-foot range, leaving the 1985 full-year total at 410 million square feet—a barely perceptible improvement over 1984's total of 405 million square feet.

Early in 1986, contracting for stores and warehouses should be advancing again in response to the expected 1985 turnaround of housing starts.

Manufacturing Building: On the basis of unrealized potential, there's no better nonresidential construction market than industrial building. From its former peak rate of 253 million square feet (1979:III), contracting declined for 14 quarters through the prolonged recession and industrial trauma of the early 1980s to a cyclical low of only 90 million square feet in 1983:I. During the economy's vigorous 1983/84 recovery, contracting rebounded to the current rate of 170 million square feet (1984:III), but this still left the industrial building market closer to its former trough than to its next peak.

A long look backwards to the early 1960s shows that each cyclical peak of industrial construction is lower than the one before it. The next cyclical peak, which is tentatively due in 1988 when the rate of manufacturing capacity utilization reaches its cyclical limit of 87

percent, will be 225 million square feet—about 10 percent below the 1979 peak. To get from here to there, contracting for industrial construction needs several more years of expansion. In 1985, an estimated 16 percent gain to 180 million square feet will be the second step toward that potential.

Reindustrialization?

After its long decline, the industrial building market has reawakened in 1984. With few exceptions, manufacturers are expanding, modernizing, and relocating their plant facilities in preparation for the markets (and the competition) of the second half of the 1980s.

Pacing this year's overall 42 percent gain in contracting for industrial construction are the following industries:

- **Metals:** Up 78 percent (primary producers expanding faster than fabricators)
- **Building Materials:** Up 61 percent (forest products lagging)
- **Transportation:** Up 53 percent (auto makers having doubled last year's building)

Close to the all-industry average for 1984 is:

- **Machinery:** Up 45 percent (electrical machinery holding a slight edge)

Industries with below-average gains, but with gains nonetheless:

- **Chemicals:** Up 32 percent
- **Food/Tobacco:** Up 7 percent

Office Buildings: Contracting for office buildings reached its cyclical peak two years ago—long before most other categories of commercial and industrial building had even begun to turn up. From the all-time record rate of 357 million square feet in 1981's third quarter, contracting retreated temporarily to a more "digestible" rate of 250 million square feet, but then took off again, rising in 1984 to a secondary peak that is rivaling the 1981 high.

Indicators of the demand for office space—growth of office-worker employment, average space per worker, relocation, replacement of losses from the stock of office buildings, etc.—say that the most the national market can absorb on a continuing basis is about 250 million square feet per year. Yet, contracting for new office space has equalled or exceeded that volume in every year since the 1980s began.

There is an abundance of explanation for why the actual rate of office building in the 1980s continues to confound econometric expectations. The *space/worker ratio*: Floor area per worker is increasing due to the need to make room for high-tech office equipment. *Frostbelt spread*: The boom which began in the Southwest may be over, but it has more recently taken hold in the Northeast and Midwest. *Real-estate tax shelters*: ERTA's accelerated depreciation provision gave the waning office boom a second life in 1983 and 1984.

These rationalizations contain enough credibility to justify the high rate of building that still prevails at the close of 1984. It would appear, however, that the demand for tax shelters has become more important than the demand for space itself. Until depreciation rules are modified, it must be expected that the subsidy they currently provide will continue to stimulate a higher volume of new construction than the underlying forces of the office market would otherwise call forth.

The reality of an accumulating surplus of office space is the strongest argument for a reduced volume of office building in the years immediately ahead. On the other hand, the artificiality of tax accounting remains a powerful incentive to ignore rising vacancy rates a while longer. A decline of contracting is still the "must" forecast, but the expected decline should make allowance for the upward bias that ERTA has introduced.

A forecast of 250 million square feet next year implies more optimism on the part of developers than market conditions would ordinarily justify, but these are not ordinary times. The alternative—

1985 Regional Estimates Dodge Construction Potentials

North-east

CT, ME, MA, NH, NJ, NY,
PA, RI, VT

	1984 Pre- liminary	1985 Forecast	Percent Change 1985/84
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	\$ 8,000	\$ 7,800	- 2
Institutional and Other	4,250	4,550	+ 7
Total	\$12,250	\$12,350	+ 1
Residential Buildings			
One-Family Houses	\$ 8,100	\$ 8,225	+ 2
Multifamily Housing	3,600	3,425	- 5
Nonhousekeeping Residential	1,025	1,025	—
Total	\$12,725	\$12,675	—
Nonbuilding Construction			
Highways and Bridges	\$ 2,925	\$ 3,200	+ 9
Other Public Works	3,075	3,300	+ 7
Utilities	400	400	—
Total	\$ 6,400	\$ 6,900	+ 8
Total Construction	\$31,375	\$31,925	+ 2

South

AL, AR, DE, DC, FL, GA, KY,
LA, MD, MS, NC, OK, SC,
TN, TX, VA, WV

	1984 Pre- liminary	1985 Forecast	Percent Change 1985/84
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	\$18,050	\$17,800	- 1
Institutional and Other	9,500	10,075	+ 6
Total	\$27,550	\$27,875	+ 1
Residential Buildings			
One-Family Houses	\$30,625	\$29,550	- 4
Multifamily Housing	13,050	11,625	- 11
Nonhousekeeping Residential	3,200	3,000	- 6
Total	\$46,875	\$44,175	- 6
Nonbuilding Construction			
Highways and Bridges	\$ 6,250	\$ 6,650	+ 6
Other Public Works	5,550	5,800	+ 5
Utilities	1,700	2,000	+ 18
Total	\$13,500	\$14,450	+ 7
Total Construction	\$87,925	\$86,500	- 2

North Central

IL, IN, IA, KS, MI, MN,
MO, NE, ND, OH, SD, WI

	1984 Pre- liminary	1985 Forecast	Percent Change 1985/84
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	\$ 9,025	\$ 9,150	+ 1
Institutional and Other	5,100	5,350	+ 5
Total	\$14,125	\$14,500	+ 3
Residential Buildings			
One-Family Houses	\$10,450	\$10,400	—
Multifamily Housing	3,675	3,400	- 7
Nonhousekeeping Residential	1,150	1,000	- 13
Total	\$15,275	\$14,800	- 3
Nonbuilding Construction			
Highways and Bridges	\$ 4,875	\$ 5,125	+ 5
Other Public Works	3,425	3,450	+ 1
Utilities	500	600	+ 20
Total	\$ 8,800	\$ 9,175	+ 4
Total Construction	\$38,200	\$38,475	+ 1

West

AK, AZ, CA, CO, HI, ID, MT, NV,
NM, OR, UT, WA, WY

	1984 Pre- liminary	1985 Forecast	Percent Change 1985/84
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	\$12,475	\$12,175	- 2
Institutional and Other	5,825	6,400	+ 10
Total	\$18,300	\$18,575	+ 2
Residential Buildings			
One-Family Houses	\$17,575	\$17,750	+ 1
Multifamily Housing	7,925	7,375	- 7
Nonhousekeeping Residential	1,775	1,725	- 3
Total	\$27,275	\$26,850	- 2
Nonbuilding Construction			
Highways and Bridges	\$ 3,250	\$ 3,525	+ 8
Other Public Works	3,925	4,125	+ 5
Utilities	900	1,000	+ 11
Total	\$ 8,075	\$ 8,650	+ 7
Total Construction	\$53,650	\$54,075	+ 1

the "sudden collapse" scenario—has a low probability, but it cannot be ruled out altogether. That was exactly how the REIT-sponsored boom of the early 1970s concluded.

The High Five

1984's surprising rebound of office building to a near-record 300 million square feet looks a lot like the 1981 boom all over again. It's not. Despite many similarities, there are some interesting differences, too.

- The 1984 "re-boom" is more widely dispersed. In 1981, more than one-third of the national total of newly added office space was concentrated in only five cities. This year's top five account for one-quarter of total building.

- The lineup of top office cities has changed, and 1984's office building market speaks with less of a Southwestern accent. This year's number one city is Washington, and 1981's leader, Houston, isn't even among the current top ten. New to the nation's first five list in 1984 are San Francisco and—take your pick—Chicago or New York, which are tied for fifth place.

- Unquestionably the two most durable office building markets in the 1980s, holding positions two and three in both 1981 and 1984, are Dallas and Los Angeles.

- Just below 1984's leaders are: Atlanta, Denver, Phoenix, Boston, and Miami—in that order.

Institutional Building: The temptation to underrate the institutional building market is hard to resist. Its dreary trend of steady decline began as long ago as 1970, when contracting was still a healthy 400 million square feet per year. Demographic support for educational building waned, and volume slipped to only 300 million square feet by the end of that decade, with still worse to come as the early 1980s brought additional woes. Federal budget cuts, extremely high interest rates, and the erosion of tax revenues by recession combined to undermine publicly financed building. By 1982, contracting had fallen to only 256 million square feet.

The long decline of institutional building may finally be turning around. Mostly because the downward pull of educational building appears to have ended, the direction of total institutional building is likely to be generally upward in the years ahead.

It is still too early to be looking for a surge of educational building, because the initial effect of rising enrollments will be simply to fill empty desks. What's more, interregional migration—the major source of demand in the late 1970s—has slowed considerably. But the long-term forces that were responsible for a decade of declining school construction are now beginning to form the base for eventual expansion, beginning with stability for the next few years.

Liberated from the drag of educational building, the modest growth potential of several other categories of institutional building is becoming dominant. In 1985, a 5 percent advance to 280 million square feet is expected to be the start of a rising trend of contracting that will bring the annual total of institutional building to 300 million square feet before the end of the 1980s.

Total Nonresidential Building: With one major nonresidential building market still expanding vigorously, another just reaching its peak, and yet another on the brink of decline, the 1985 total of nonresidential building contracting could be up...or down. But whichever way it goes, next year's change will be more in the composition than the size of the nonresidential building market.

Office building, about which there is the greatest uncertainty, holds the key. In the unlikely event that the office boom collapses suddenly, it would take total nonresidential building down with it.

The more credible prospect of a gradual winding down of office building over the next two or even three years would leave 1985's nonresidential building total virtually even with the 1984 volume at an estimated 1.2 billion square feet. Assuming an average construction cost increase of 5 percent, contract value would increase to \$73.3 billion next year.

Nonresidential Building Contract Value

Seasonally adjusted annual rates, in billions of dollars

Year/Quarter	Total	Commercial/ Industrial	Institutional
1984 I	\$67.0	\$43.6	\$23.4
II	73.4	49.1	24.3
III	74.6	49.0	25.6
IV	73.9	48.5	25.4
1985 I	\$73.5	\$47.9	\$25.6
II	73.4	47.4	26.0
III	73.0	46.4	26.6
IV	73.3	46.0	27.3
1984	\$72.2	\$47.5	\$24.7
1985	\$73.3	\$46.9	\$26.4
% Change	+ 1	- 1	+ 1

Construction In 1985: The Decline That Isn't Happening

The construction market lost its momentum in 1984 when rising interest rates put a chill on the housing sector. Offsetting gains in commercial and industrial building sustained total contracting through the latter part of the year, but the risk of yet another credit-inspired cyclical decline in 1985 could not be ignored.

With interest rates now beginning to turn around, the 1985 outlook becomes more positive than it was only a few months ago. As rates retreat during 1985, the next several quarters are likely to look something like a replay of 1984 in reverse.

- Housing starts, in counterpoint to declining mortgage rates, will be weakest as 1985 begins and pick up strength in the second half—opposite to 1984's quarterly pattern.

- Nonresidential building, now peaking at an annualized rate close to 1.3 billion square feet, will be settling back in 1985 as some of the current support of office building diminishes—also the opposite of 1984.

- Public works construction, which recently reached a new plateau, will be showing little change next year (in constant dollars) and, consequently, will have minimal influence on the direction of total construction activity.

One result of these developments will be to sustain the total of newly started construction in 1985 at a value very close to 1984's record \$211 billion. More important, though, is that once the handicap of rising interest rates is removed, some of the earlier momentum that was lost in the summer of 1984 will be restored. Quarter-by-quarter strengthening of construction contracting through 1985 should bring the building industry into position for a solid advance in 1986.

Prepared October 1984
by the Economics Department,
McGraw-Hill Information
Systems Company.

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